

REMARKS

Claims 1-58 and 60-76 are pending in the above-captioned patent application after this amendment. Claims 1-3, 8, 12, 15, 18, 23-25, 30, 34, 39, 44, 45, 48, 51 and 54 have been rejected. Claims 4-7, 9-11, 13, 14, 16, 17, 19-22, 26-29, 31-33, 35-38, 40-43, 46, 47, 49, 50, 52, 53 and 55-58 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Applicants respectfully disagree with the rejection of claims 1-3, 8, 12, 15, 18, 23-25, 30, 34, 39, 44, 45, 48, 51 and 54. However, the Applicants have amended claims 1, 5, 7, 11, 23-44, 47 and 50, and added new claims 60-76 for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office (65 Fed. Reg. 54603), and/or to clarify what the Applicants regard as the present invention. Claims 5, 7, 11, 29, 33, 39, 40, 47 and 50 have been amended to overcome certain informalities.

Support for the amendments to claims 1, 5, 7, 11, 23- 44, 47 and 50 can be found throughout the originally filed specification. In particular, support for the amendments to claims 1, 5, 7, 11, 23-44, 47 and 50 can be found in the specification at page 8, line 27 through page 9, line 2, at page 10, lines 3-12, at page 11, line 20 through page 12, line 13, at page 14, lines 17-24, in Figures 1, 2, 3A and 4A, and in the originally filed claims.

Support for the new claims 60-76 can be found throughout the originally filed specification. In particular, support for new claims 60-76 can be found in previously filed claims 3-7, 9-14, 16, 17 and 19-22.

New claim 60 is based on originally filed claim 4 rewritten in independent form. Therefore, new claim 60 is not narrower in scope than originally filed claim 4. Original claim 4 was found to contain patentable subject matter. Accordingly, new claim 60 is considered to be in condition for allowance.

New claim 66 is based on originally filed claim 11 rewritten in independent form. Therefore, new claim 66 is not narrower in scope than originally filed claim 11. Original claim 11 was found to contain patentable subject matter. Accordingly, new claim 66 is considered to be in condition for allowance.

New claim 67 is based on originally filed claim 14 rewritten in independent form. Therefore, new claim 67 is not narrower in scope than originally filed claim 14. Original claim 14 was found to contain patentable subject matter. Accordingly, new claim 67 is considered to be in condition for allowance.

New claim 68 is based on originally filed claim 16 rewritten in independent form. Therefore, new claim 68 is not narrower in scope than originally filed claim 16. Original claim 16 was found to contain patentable subject matter. Accordingly, new claim 68 is considered to be in condition for allowance.

New claim 70 is based on originally filed claim 19 rewritten in independent form. Therefore, new claim 70 is not narrower in scope than originally filed claim 19. Original claim 19 was found to contain patentable subject matter. Accordingly, new claim 70 is considered to be in condition for allowance.

New claim 74 is based on originally filed claim 3 rewritten in independent form. Therefore, new claim 74 is not narrower in scope than originally filed claim 3.

New claim 75 is based on originally filed claim 12 rewritten in independent form. Therefore, new claim 75 is not narrower in scope than originally filed claim 12.

No new matter is believed to have been added by this amendment.

Reconsideration of the pending application is respectfully requested in view of the above-recited amendments and the arguments set forth below.

Information Disclosure Statement

The Applicants filed an Information Disclosure Statement on March 28, 2003, including Form PTO 1449 (modified). However, the Applicants note that this Information Disclosure Statement has not been formally acknowledged by the Patent Office, nor has the Form PTO 1449 (modified) been initialed by the Examiner and provided to the Applicants. Therefore, a duplicate copy of the Information Disclosure Statement dated March 28, 2003 is provided herewith, including a copy of the original return receipt postcard indicating receipt by the Patent Office on April 3, 2003. The Applicants request that the Patent Office acknowledge the Form PTO 1449 (modified).

Allowable Subject Matter

The Patent Office provided that claims 4-7, 9-11, 13, 14, 16, 17, 19-22, 26-29, 31-33, 35-38, 40-43, 46, 47, 49, 50, 52, 53 and 55-58 contain allowable material and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 23 has been amended to include the limitations of claim 40. Therefore amended claim 23 is not narrower in scope than originally filed claim 40. Original claim 40 was found to contain patentable subject matter. Accordingly, amended claim 23 is considered to be in condition for allowance. Because claims 24-43 depend from claim 23, they are also considered to be in condition for allowance.

As stated above, new claim 60 is based on original claim 4 rewritten in independent form. Original claim 4 was found to contain patentable subject matter. Accordingly, new claim 60 is considered to be patentable. Because new claims 61-65 depend either directly or indirectly upon new claim 60, they are also considered to be patentable. Additionally, new claims 61-65 are largely based on original claims 5-7, 9 and 10 respectively, which were also found to contain patentable subject matter.

Additionally, as stated above, new claim 66 is based on original claim 11 rewritten in independent form. Original claim 11 was found to contain patentable subject matter. Accordingly, new claim 66 is considered to be patentable.

Further, as stated above, new claim 67 is based on original claim 14 rewritten in independent form. Original claim 14 was found to contain patentable subject matter. Accordingly, new claim 67 is considered to be patentable.

Still further, as stated above, new claim 68 is based on original claim 16 rewritten in independent form. Original claim 16 was found to contain patentable subject matter. Accordingly, new claim 68 is considered to be patentable. Because new claim 69 depends directly upon new claim 68, it is also considered to be patentable. Additionally, new claim 69 is based on original claim 17, which was also found to contain patentable subject matter.

Yet further, as stated above, new claim 70 is based on original claim 19 rewritten in independent form. Original claim 19 was found to contain patentable subject matter. Accordingly, new claim 70 is considered to be patentable. Because new claims 71-73

depend directly upon new claim 70, they are also considered to be patentable. Additionally, new claims 71-73 are based on original claims 22, 20 and 21 respectively, which were also found to contain patentable subject matter.

Claim Objections

Claim 7 has been objected to because the "phrase, 'substantially equal and oppose to force' is not proper English." Claim 7 has been amended to provide the proper verb tense and to include an article in front of "force" as follows, "substantially equal and opposite to a force". Accordingly, the Applicants respectfully submit that the basis for the objection to claim 7 has been overcome and that the objection should be withdrawn.

Similarly, claims 11, 29, 33, 47, and 50 have been objected to because the "phrase 'substantially equal and oppose to a force' is not proper English." Claims 11, 29, 33, 47, and 50 have been amended to provide the proper verb tense as follows, "substantially equal and opposite to a force". Accordingly, the Applicants respectfully submit that the basis for the objection to claims 11, 29, 33, 47 and 50 has been overcome and that the objection should be withdrawn.

Claim 15 has been objected to because "Claim 1 recited a motor including a magnet component, the magnet being surrounded by a magnetic field. Claim 15 takes only the conductor component of claim 1, puts the conductor component in a linear motor and adds a magnet component including a magnet surrounded by a magnetic field. Taking limitations out of a claim only to add them back in is confusing." The Applicants respectfully assert that the "magnet component including a magnet that is surrounded by a magnetic field" is merely a portion of the preamble of claim 1, and, as such, is not actively claimed in claim 1. In contrast, "a magnet component" is actively claimed in claim 15 as an element of a linear motor, in addition to the conductor component of claim 1. Accordingly, the Applicants respectfully submit that claim 15 recites additional limitations as compared to claim 1 and that the objection to claim 15 should be withdrawn as improper.

Claims 39 and 40 have been objected to because the "phrase 'the linear motor' lacks antecedent basis as claim 23 only refers to a brushless electric motor and does not specify whether the motor is rotary or linear." Claims 39 and 40 have been amended to

remove any recitation of the phrase "the linear motor". Accordingly, the Applicants respectfully submit that the basis for the objection to claims 39 and 40 has been overcome and that the objection should be withdrawn.

Rejections Under 35 U.S.C. § 102(b)

Claims 1-3, 8, 12, 15, 18, 23-25, 30, 34, 39, 44, 45, 48, 51, and 54 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kähkipuro et al. (U.S. Patent No. 6,305,501 B1). The Applicants have amended claim 1, 23 and 44 with this amendment although the Applicants believe that claims 1, 23 and 44 were patentable as originally written. The Applicants respectfully submit that amended claims 1, 23 and 44 are patentable over the cited reference. Additionally, as noted above, new claim 74 is based on original claim 3 rewritten in independent form, and new claim 75 is based on original claim 12 rewritten in independent form. The Applicants respectfully traverse the rejection of new claims 74 and 75.

More particularly, the Examiner contends that "Kähkipuro et al. discloses a switched reluctance motor with a drive winding 16 and a magnet component 24, the magnet component being an iron structure magnetized by induction by the drive winding 16. The drive winding generates a stray magnetic field as described in column 4 lines 44-52. An auxiliary conductor array 28 generates an auxiliary magnetic field that interacts with the stray magnetic field and reduces the stray magnetic field as described in column 4 lines 52-54."

The Applicants provide that Kähkipuro et al. is directed to a drive system for an elevator comprising a stator 2 that is permanently fitted to a wall 1 and a movable slide 4 including a rotor that is fitted in conjunction with the elevator car 6 and moves with the elevator car 6, an air gap 20 separating the stator 2 from the rotor. The stator 2 includes a plurality of component stators 8 comprising a magnetic circuit 10 with teeth 12 pointing toward the rotor. Coils 16 are wound around the stator teeth 12, and current flowing in the coils 16 generates a magnetic flux 18 that passes across the air gap 20 into the magnetic circuit 22 of the rotor, which consists of rotor teeth 24. Kähkipuro et al. reduces the stray flux by placing the stator windings close to the air gap 20. In an alternative embodiment, Kähkipuro et al. states that stray flux is reduced by winding coils 28 around the rotor teeth

24 as well. (Kähkipuro et al. Abstract, column 3, line 49 through column 4, line 7, column 4, lines 44 through column 5, line 8, and in Figures 1, 2a and 3a).

However, Kähkipuro et al. does not disclose a conductor component for a motor including a motor drive conductor array and an auxiliary conductor array that move concurrently relative to a magnet component. Further, Kähkipuro et al. is not believed to teach or disclose an auxiliary magnetic field that has substantially no influence on the position of the conductor component relative to the magnet component. Additionally, the rotor teeth 24, around which the auxiliary coils 28 are wound, are fitted to the elevator car 6, and thus are not retained by the conductor housing.

In distinction to Kähkipuro et al, amended claim 1 of the present application recites "(a) conductor component ... comprising: a motor drive conductor array that moves relative to the magnet component and generates a drive magnetic field and a stray magnetic field when electrical current is directed through the motor drive conductor array, the drive magnetic field interacting with the magnetic field of the magnet to generate a reactive force; and an auxiliary conductor array that moves concurrently with the motor drive conductor array relative to the magnet component and generates an auxiliary magnetic field that interacts with the stray magnetic field and reduces the stray magnetic field."

Because Kähkipuro et al. lacks the teaching of amended claim 1, as is required to substantiate a § 102(b) rejection, the rejection is believed to be overcome with respect to claim 1 and Kähkipuro et al. Because claims 2-22 depend either directly or indirectly upon amended claim 1, they are likewise patentable.

Further, as provided above, Claim 23 has been amended to include the limitations of claim 40. Original claim 40 was found to contain patentable subject matter. Accordingly, claim 23 is considered to be in condition for allowance. Because claims 24-43 depend from claim 23, they are also considered to be in condition for allowance.

Additionally, in distinction to Kähkipuro et al, amended claim 44 of the present application recites "(a) method for manufacturing a brushless electric motor ... comprising the steps of: providing a magnet component including a plurality of magnets, each of the magnets being surrounded by a magnetic field; providing a conductor component that includes a motor drive conductor array, the motor drive conductor array

moving relative to the magnet component and generating a drive magnetic field and a stray magnetic field when electrical current is directed through the motor drive conductor array, the drive magnetic field interacting with the magnetic fields of the magnets to generate a reactive force that is used to move one of the components relative to the other component; and providing an auxiliary conductor array that moves concurrently with the motor drive conductor array relative to the magnet component and generates an auxiliary magnetic field that interacts with the stray magnetic field and reduces the stray magnetic field."

Because Kähkipuro et al. lacks the teaching of amended claim 44, as is required to substantiate a § 102(b) rejection, the rejection is believed to be overcome with respect to claim 44 and Kähkipuro et al. Because claims 45-58 depend directly upon amended claim 44, they are likewise patentably distinguishable over Kähkipuro et al.

Still further, in distinction to Kähkipuro et al., new claim 74 of the present application recites "(a) conductor component ... comprising: a motor drive conductor array that generates a drive magnetic field and a stray magnetic field when electrical current is directed through the motor drive conductor array, the drive magnetic field interacting with the magnetic field of the magnet to generate a reactive force; and an auxiliary conductor array that generates an auxiliary magnetic field that interacts with the stray magnetic field and reduces the stray magnetic field, wherein the auxiliary magnetic field has substantially no influence on the position of the conductor component relative to the magnet component."

Because Kähkipuro et al. does not disclose all of the elements of claim 74, the § 102(b) rejection is unsupported by the art and should be withdrawn.

Yet further, in distinction to Kähkipuro et al., new claim 75 of the present application recites "(a) conductor component ... comprising: a motor drive conductor array that generates a drive magnetic field and a stray magnetic field when electrical current is directed through the motor drive conductor array, the drive magnetic field interacting with the magnetic field of the magnet to generate a reactive force; an auxiliary conductor array that generates an auxiliary magnetic field that interacts with the stray magnetic field and reduces the stray magnetic field; and a conductor housing that retains the motor drive conductor array and the auxiliary conductor array."

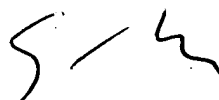
Because Kähkipuro et al. does not disclose all of the elements of claim 75, the § 102(b) rejection is unsupported by the art and should be withdrawn. Because claim 76 depends directly upon claim 75, it is likewise patentably distinguishable over Kähkipuro et al. Additionally, claim 76 is based on previous claim 13, which was found to contain patentable subject matter.

Conclusion

In conclusion, the Applicants respectfully assert that claims 1-58 and 60-76 are patentable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-456-1951 for any reason that would advance the instant application to issue.

Dated this the 26th day of January, 2004.

Respectfully submitted,



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